

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Case No. 00-1123-H)

In application of:)	
)	
Cunningham et al.)	
)	Examiner: S. Latimer
Serial No. 10/058,626)	
)	Group Art Unit: 1645
Filed: January 28, 2002)	
)	Conf. No. 4870
For: Optical Detection of Label-Free)	
Biomolecular Interactions Using)	
Microreplicated Plastic Sensor Elements)	

STATEMENT OF APPLICANTS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the duty of disclosure provided by 35 C.F.R. § 1.56 and §§ 1.97-98,
the applicants wish to make the following statement of record in the above-identified
application.

Applicants wish to clarify the specification. The specification states that:

When the effective index of refraction of the grating region is greater than the substrate or the cover layer, a waveguide is created. When a filter is designed properly, incident light passes into the waveguide region and propagates as a leaky mode. An optical grating structure selectively couples light at a narrow band of wavelengths into the waveguide. The light propagates only a very short distance (on the order of 10-100 micrometers), undergoes scattering, and couples with the forward- and backward-propagating zeroth-order light. See page 31, lines 3-10.

However, Applicants have recently used techniques that provide for better resolution than were available to the Applicants at the time the application was filed and have determined

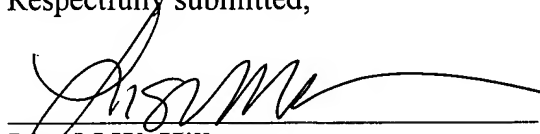
that the biosensor structure is not accurately characterized as a waveguide because propagation of guided modes in the lateral direction are not supported. Rather, the guided mode resonant effect has been demonstrated to occur over a highly localized region of approximately 3 microns from the point that any photon enters the structure instead of the original determination of 10-100 micrometers.

Respectfully submitted,

Date:

5/4/04

By:



Lisa M.W. Hillman

Reg. No. 43,673

FORM PTO-1449 (Rev. 2-32)	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 00-1123-H	Serial No. 10/058,626
THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)		Applicant: Cunningham, et al.	
		Filing Date: January 28, 2002	Group: 1645

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

1.	Statement of Applicants dated May 4, 2004
2.	Bertoni, et al., "Frequency-Selective Reflection and Transmission by a Periodic Dielectric Layer", <i>IEEE Transactions on Antennas and Propagation</i> , Vol. 37, No. 1, pp. 78-83 (1989)
3.	Brundrett, et al., "Normal-incidence guided-mode resonant grating filters: design and experimental demonstration", <i>Optics Letters</i> , Vol. 23, No. 9, pp. 700-702 (1998)
4.	Peng, "Polarization-control Components and Narrow-band Filters Based on Subwavelength Grating Structures" 1996
EXAMINER	
DATE CONSIDERED	

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.